

S. 736.00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837,

Card 2 / 3

ILLEGIBLE

The high-temperature strength...

S/736/60/000/002/006/007

10-12% and 7-10%, respectively. TiC-NbC-Co alloys: 10-15% NbC increases the scale resistance of TiC alloys by some 150-200°C, but engenders some loss in strength. In TiC-NbC-Co alloys a Co content from 10-40% was tested (with 10-15% NbC); maximum strength in bending occurred at 25-30% Co. Tests with a 25% Co content and 3 to 30% NbC contents showed a nearly constant bending strength ($\sim 90 \text{ kg/mm}^2$) up to 12-13% NbC, followed by a significant drop-off at NbC contents up to 20%. The bending strength of an alloy with 15% NbC and 25% Co (optimal scale resistance) increased steadily from 80 to 90 kg/mm^2 from 20 to 700° (attributed to plasticity), then dropped to 65 kg/mm^2 at 1000°. The tensile strength of the same alloy decreases in a straight line from 34 kg/mm^2 at 950° to 13 kg/mm^2 at 1200°. 100-hour tests indicate that the alloy retains high-temperature strength only up to 1000°. TiC-WC-Co alloys: The scale resistance of the W-containing alloys is lower than that of the Nb-containing alloys. Variations in WC content from 15 to 30% and in Co from 10 to 23% do not affect the strength of the TiC-based alloys appreciably. The σ -vs.-T curves of the 10% Co and the 25% Co alloys cross over at 800° and 80 kg/mm^2 , and at higher T up to 1000° the 10% Co alloy is stronger than the 25% Co alloy. The tensile strength of the 30% WC, 15% Co, 55% TiC alloy descends linearly from 40 kg/mm^2 at 950° to 12 kg/mm^2 at 1200°. 100-hr tensile tests indicate a high-T strength limit of only 900°. Summary: TiC-WC-Co alloys are stronger ($E=38-40 \cdot 10^3 \text{ kg/mm}^2$) but less high-T resistant ($T_{\text{max}}/100 \text{ hr}=900^\circ\text{C}$) than TiC-NbC-Co ($E=30.5-31.5 \cdot 10^3 \text{ kg/mm}^2$; $T_{\text{max}}=1000^\circ$). There are 13 figures and 7 refs. (3 English-language and 4 German) Card 3/3

ASSOCIATION: None given.

The high-temperature strength...

S/736/60/000/002/006/007

prismatic, 5x5x40 and 6x6x50 mm. Tests up to 1000°C were made on a special Silit-resistor-heated accessory (cross-section shown) installed on the P-5 (R-5) universal testing machine. The specimen was supported as a simple beam on hard-alloy or sintered aluminum-oxide supports with a 30-mm span and was subjected to a ball-centered load advancing at a rate of 11 mm/min. A PtRh-Pt contact thermocouple measured the temperature; mean results were taken from no less than 15 specimens. The tensile-strength test specimens had the shape proposed by Prof. S. V. Sørensen (Russian transliteration "Serensen"); they were 120 mm long, 7 mm thick, 21.2 mm wide at the ends, and had a 20° inward straight taper for 26.2 mm from the ends and a R=194.5 mm circular fairing between the tapers to arrive at a 40 to 45 mm² neck section at the center. Precise dimensions were obtained by boron-carbide rubbing of the sintered specimens. Only the central 20 mm of each specimen were brought to the test temperature (15-20 min heating, 20-min holding), while the asbestos-padded hinge-clamped ends remained outside the furnace. During the 1200° tests, the upper end did not exceed 800-900°, the lower end 700-800°. Tests in which rupture occurred outside of ±5 mm from the midpoint of the specimen were not included in the evaluation. A structural cross-section and a general-view photograph of the testing machine, the ПМ-1350 (PI-1350) tubular Pt heater (manufactured by the "Platinopribor" factory), and its installation on the ДСТ-5000 (DST-5000) creep tester are shown. Room-temperature tension-data scatter was 12-15%, as against 10-12% at high temperature. The bending-data scatter was

Card 2/3

S/736/60/000/002/006/007

AUTHORS: Brokhin, I.S., Ol'khov, I.I., Ashmarin, G.M., Baranov, A.I.,
Platov, A.B., Repkin, V.P.

TITLE: The high-temperature strength of sintered titanium-carbide hard alloys.

SOURCE: Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov.
Sbornik trudov. no.2. Moscow, 1960. Tverdye splavy. pp.135-147.

TEXT: Following a review of recent Western progress in the manufacture of heterogeneous carbide alloys sintered with Co, Ni, Ni-Cr, and other cementing binders, and more especially the Austrian WZ and the U.S. "Kanthanium" alloy (cf. Harwood, //no initials//, Materials and Methods, v.36, no.2, 1952), with reference to the manufacture of gas-turbine blades, the brittleness and thermal-shock sensitivity of such alloys is criticized. The authors experimented with sintered TiC-NbC and TiC-WC alloys cemented with pure Co powder from 1950 through 1953. Short-term and 100-hour strength tests were made at room temperature and temperatures up to 1200°C. For details on the source materials, cf. the paper by I.S. Brokhin and I.I. Ol'khov on p.148 of this compendium (Abstract S/736/60/000/002/007/007); the compound carbides were obtained by the calcining of a mixture of finely-ground powders of the simple carbides at 2000-2200°. Test specimens comprise (a) TiC-NbC-Co with 3 to 30% NbC and 10 to 40% Co, and (b) TiC-WC-Co with 15 to 35% WC and 10 to 25% Co. Bending-strength test specimens were

Card 1/3

L 19905-63

ACCESSION NR: AF3005815

$$H = B \cdot 10^{-At},$$

where H is hardness (Wickers), t is temperature in °C, A and B are constants. In ternary alloys, the inflection temperature increased with the decrease in Ti carbide, while it remained unaffected by the increase in Co content. With TiC = 0, the inflection temperature was 700-720C and with TiC = 60% wt. the temperature was 370C. Orig. art. has: 1 formula, 3 tables, and 7 figures.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov
(All-Union Scientific Research Institute of Hard Alloys)

SUBMITTED: 22Jul62

DATE ACQ: 06Sep63

ENCL: 00

SUB CODE: ML

NO REF SOV: 012

OTHER: 001

Card 2/2

L 19905-63

EWPC(q)/EWT(m)/EWP(B)/BDS AFFTC/ASD JD/JG

ACCESSION NR: AP3005815

S/0226/63/000/004/0067/0075

AUTHOR: Platov, A. B.

TITLE: Relation of hardness to temperature in Ti-W-Co solid alloys

SOURCE: Poroshkovaya metallurgiya, ²⁷⁻²⁷⁻¹⁷ no. 4, 1963, 67-75

TOPIC TAGS: Ti-W-Co alloys, hardness

ABSTRACT: The relation of hardness (H) to temperature (t) in Ti-W-Co alloys was studied. Some of the results presented were obtained from the literature, others from experiments. The relation of log H to t in binary Ti-Co alloys is presented graphically, the curves showing different numbers of inflections at different temperatures. It was established that the content of Co did not affect the inflection temperature at equal content of Ti carbide; nor did the addition of Ta carbide to Ti carbide affect the inflection temperature. The temperature was not affected by the average size of the carbide phase (WC - TiC). The differences between the curves observed for various alloys and for the same alloy were probably due to the difference in grain sizes of the carbide phase. The relation of hardness to temperature in binary as well as ternary alloys followed the Ito-Shishokin exponential equation:

Card 1/2

L 62707-65

ACCESSION NR: AP5018276

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov,
Moscow (All-Union Scientific Research Institute of Hard Alloys) 44,55 3

SUBMITTED: 15 Jun 64

ENCL: 00

SUB CODE: MM

NO REF SOV: 002

OTHER: 006

ATD PRESS: 4064

Card 2/2

L 62707-65 EPT(c)/EPT(n)-2/EPA(s)-2/EPA(w)-2/EWA(s)/EWT(m)/EWP(i)/EWP(b)/T/EWP(e)/
 ACCESSION NR: AP5018276 EWP(b) Pr-1/Ps-1/Pt-7/Pu-4 UR/0226/65/000/007/0074/0079
 IJP(a) WN/JD/JG/WH
 AUTHOR: Brokhin, I. S.; Platonov, A. E.
 TITLE: Al_2O_3 -Mo and ZrO_2 -Mo cermets and their structure
 SOURCE: Poroshkovaya metallurgiya, no. 7, 1965, 74-79
 TOPIC TAGS: cermet, molybdenum base cermet, dispersion strengthened alloy, molybdenum alloy, aluminum oxide containing alloy, zirconium oxide containing alloy
 ABSTRACT: Cermets composed of molybdenum and 5-70% aluminum or zirconium oxide can be produced either by hot compacting at 1670-1700C under 110 dan/cm² pressure or by cold compacting under 120-125 dan/cm² pressure, followed by two stage sintering, first at 1100C and then at 1700C. The density of specimens produced by either of these procedures was approx. 94-98%, and efforts to obtain a higher density were unsuccessful. Both cermets consisted of two phases: molybdenum and aluminum or zirconium oxides. The grain size of components in the structure of cold-compacted sintered specimens was larger than that of hot-compacted specimens. Two interwoven networks, ceramic and metallic, were observed in the structure. No signs of chemical interaction were observed. The hardness of Al_2O_3 -Mo cermets increases linearly with increasing the Al_2O_3 content. Orig. art. has: 7 figures and 2 tables. [ND]

Cord 1/2

PLATOV, A.B.

"High refractory materials and oxide products" by S.G. Tresviatskii,
A.M.Cherepanov. Reviewed by A.B.Platov. Ogneupory 25 no.2:94-96
'60. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov.
(Refractory materials) (Oxides) (Tresviatskii, S.G.)
(Cherepanov, A.M.)

82627
S/180/60/000/004/022/027
E193/E483

A Statistical Study of the Transverse Rupture Strength of Tungsten Carbide/Cobalt Alloys at Room and Elevated Temperatures

where A, B and C are constants. (4) The variation of σ with the grain size d of the WC particles (the cobalt content being constant) is described by

$$\sigma = d(A + Bd + Cd^2)^{-1}$$

where A, B and C are constants. (5) The relationship between the grain size d of the WC particles and the thickness h of the cobalt layers separating the carbide grains is described by $d = \log h$. (6) The formulae proposed for the Co-WC alloys are valid for other similar systems. There are 2 figures, 7 tables and 10 references: 9 Soviet and 1 English.

SUBMITTED: January 25, 1960

Card 2/2

18.6100

82627

18.8200

S/180/60/000/004/022/027
E193/E483AUTHOR: Platov, A.B. (Moscow)TITLE: A Statistical Study of the Transverse Rupture Strength
of Tungsten Carbide/Cobalt Alloys at Room and
Elevated TemperaturesPERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh
nauk, Metallurgiya i toplivo, 1960, No.4, pp.136-142

TEXT: Using a statistical method of analysis of experimental results, both his own and those obtained by several other workers, the present author showed that, contrary to the findings of Kreymer et al. (Ref.5), the temperature dependence of the transverse rupture strength σ of cobalt-bonded sintered tungsten carbides containing 4 to 25 wt. % Co, has no maximum either at high ($> 400^\circ\text{C}$) or at low (200 to 400°C) temperatures. Several other conclusions were reached. (1) At high temperatures, σ of WC-Co alloys containing less than 8% Co is higher than that of alloys with the cobalt content exceeding 8%. (2) The temperature dependence of σ is described by $\sigma = B \times 10^{-At^4}$, where A and B are constants and t denotes temperature. (3) The effect of the cobalt content M on σ at temperatures below 800°C is given by $\sigma = AM - BM^2 + C$.

Card 1/2

PLATOV, A. B.

18.1200A 18 6100

8/15/16/500/04/047/025
2091/6235

AUTHORS: Brokhin, I. S., Ol'khov, I. L., Ashmarin, G. M.,
 Kuznetsov, A. I., Platov, A. B., and Hopkin, V. P.
 TITLE: Heat Resistance of Titanium Carbide-Based Coatings
 PERIODICAL: Tsvetnyye metally, 1960, Nr 4, pp 67-70 (USSR)

ABSTRACT: In this paper, the results of an investigation of the refractoriness of Ti-Nb and Ti-Zr base alloys produced by powder metallurgy methods (carbide solid solutions) with Co as binder are reported. The influence of the NbC, WC and the binding metal on the mechanical properties of TiC alloys has been studied at room temperature and at elevated temperatures in short-term and long-term tests. The experimental alloys were made by methods generally used for the manufacture of titanium carbides. The complex carbides TiC-WC, TiC-NbC and pure powdered carbides were used as the starting materials. The complex carbides were prepared by water quenching a mixture of fine powders of the respective simple carbides from 2000 to 2200°C. In the TiC-Nb-Co alloys, the NbC content was varied from 0 to 25% and the Co content from 5 to 40% (remainder TiC), and in the TiC-WC-Co alloys, the WC content was varied from 15 to 35% and the Co

Card 1/5

ASSOCIATION: VNIITS

Card 5/5

The heat resistance of cermets ...
the long-term (100 hrs) tensile strengths (σ_{100}) at high temperatures
(up to 1200°C) of the cermet in question with relation to the temperature,
the load, and test duration. [Abstracter's note: Complete translation.]

S/C81/62/000/008/035/057
B156/B101

Card 2/2

S/081/62/000/008/035/057
B156/B101

157 2400

AUTHORS: Brokhin, I. S., Ol'khov, I. I., Ashmarin, G. N., Baranov, A. I., Platov, A. B., Repkin, V. P.

TITLE: The heat resistance of cermets on titanium carbide base

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 8, 1962, 380, abstract 8K257 (Sb. tr. Vses. n.-i. in-t tverdykh splavov, no. 2, 1960, 135-147)

TEXT: The strength indices of two series of experimental heat-resistant cermets on titanium carbide base are established: the cermets are TiC - NbC - Co containing 3-20% NbC and 10-40% Co, and TiC - WC - Co containing 15-35% WC and 10-25% Co. Short and long duration tests were made at ~20°C and at high temperatures (up to 1200°C). A procedure for making high-temperature mechanical tests on brittle cermets was devised. It is shown that the bend strengths at 20 and 1000°C of the TiC - NbC - Co cermets are related to the content of the cementing metal Co (between 10 and 40%), at NbC contents of 10-15%; it was established that the highest strengths corresponds to a Co content of 25-30%. Curves are plotted for Card 1/2

32333

Some mechanical properties of ceramics...

S/051/61 001 012 012 012
B150/B102

temperatures the strength coefficients and also the hardness of ceramics
based on aluminum oxide are greater than for metallo-ceramic hard alloys.

[Abstracter's note: Complete translation.]

15.2230

32333
S/001/61/000/024/052/006
B150/B102

AUTHORS: Brokhin, I. S., Ol'khov, I. I., Platov, A. B.

TITLE: Some mechanical properties of ceramics based on aluminum oxide and hard alloys at high temperatures

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1961, 353, abstract 24K207 (Sb. tr. Vses. n.-i. in-t tverdykh splavov, no. 2, 1960, 113 - 128)

TEXT: Investigations were made on the hardness of contemporary native ceramics, manufactured by the Moskovskiy kombinat tverdykh splavov (Moscow Combine of Hard Alloys) under mark $\text{U}1332$ (TSM 332), at temperatures up to 1100°C and on the bending strength limit at room temperature and at high temperatures up to 1200°C . The ceramics are made from technically pure α -alumina with a small additive of mineralizer (0.5% MgO). Hardness of the ceramic was plotted as a function of temperature up to 1100°C . The hardness curves differ in their course at high temperatures; they are smoother and reduction of hardness occurs more slowly for specially fine-grained ceramics. It was confirmed that at the maximum heating

Card 1/2

34700

S/137/62/000/002/001/1
11/15/1961

15.2400

AUTHOR: Platov, A. B.

TITLE: The effect of the cobalt content on the hardness of cermet WC-Co sintered carbides

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 2, 1962, 29, abstract 25232 ("Sb. tr. Vses. n.-i. in-t tverdykh splavov", 1960, no. 2, 82-89)

TEXT: It is pointed out in a number of publications that the resistance to plastic deformation of 2-phase carbides decreases linearly with an increasing lg of the average distance between solid particles. In their studies Gurland and Bardzil draw the conclusion that H_v of WC-Co sintered carbides decreases with a greater lg of the Co-layer thickness. H_v was measured in order to check whether the concepts on the mechanical properties of WC-Co sintered carbides, developed in the aforementioned studies and also by Kreymer and others, were justified. H_v tests were made with sintered carbide specimens of different granularity: BK 4 (VK4), BK (VK6), BK 15 (VK15), BK 20 (VK20), BK 4B (VK4V), BK 6B (VK6V), BK 8B (VK8V), BK 15B (VK15V), BK 20B (VK20V) and sintered Co at indenter loads of 1, 5, 10, 20, 30, and 50 kg. The imprint diagonals were

Card 1/2

On the effect of tantalum...

S/137/62/000/002/048/144
A006/A101

assumed that these changes in the hardness, when TaC is introduced, are connected with changes in the properties of the carburizing phase.

I. Brokhin

[Abstracter's note: Complete translation]

Card 2/2

X

34703

S/137/62/000/002/048/1
K006/A101

15.2400

AUTHORS: Tret'yakov, V. I., Karabasova, I. N., Platon, A. B.

TITLE: On the effect of tantalum carbide admixtures upon some properties of titanium-tungsten sintered carbides

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 33, abstract 26 262 ("Sb. tr. Vses. n.-i. in-t tverdykh splavov", 1960, no. 2, 79-81)

TEXT: Specimens of TiC-WC-Co and TiC-WC-TaC-Co sintered carbides were manufactured by sintering in H₂ atmosphere with graphite-grit filling under strictly equal conditions. Comparison experiments were made with 2 types of sintered carbide: bi-phase carbides of type T30K4 and T30K10 and 3-phase type T15K6 carbides. In sintered carbides with TaC admixtures its content was 30% of the sum of TiC + TaC; the TiC content was somewhat reduced, so that the sintered carbides had equal volumes of the TiC-phase. Hardness was tested at 20, 500, 600, 700, 900 and 1,000°C on a ВММ-1 (VIM-1) machine with a 1-kg load. It was found that H_v of Ta-containing sintered carbides at 20°C had similar or higher values; at 600 - 1,000°C their H_v had a tendency to decrease. It is

Card 1/2

1 23615-63

ACCESSION NR: AR5003994

dependence of the hardness of type TK alloys and stellites satisfies the exponential equation $H=B \cdot 10^{-At}$, where H is Vickers hardness, t is temperature, and A and B are constants. An increase in the titanium carbide content of hard alloys decreases the temperature of the inflection of the $\lg H-t$ curves from 700-720° (at 0% titanium carbide) to 370° at 60% by weight of titanium carbide. 21 literature titles. Yu. Yefimov.

SUB CODE: MM

ENCL: 00

Card 2/2

1 23615-65 ENT(a)/ENP(b)/ENA(d)/ENP(t) Pad 1JP(c) MJN/JD/WM/33
ACCESSION NR: AR5003991 8/0277/64/000/010/0021/0022

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktii i
raschet detalей mashin. Gidroprirod. Otd. vyp., Abs. 10.48.129

AUTHOR: Platov, A. B.

TITLE: Temperature dependence of the hardness of titanium-tungsten-
cobalt hard alloys and stellites

CITED SOURCE: Sb. tr. Vses. n.-i. in-t tverdykh splavov, no. 5,
1964, 189-202

TOPIC TAGS: temperature dependence, metal hardness, stellite,
titanium-tungsten-cobalt alloy, titanium carbide/TK hard alloy,
VK hard alloy

TRANSLATION: The effect of temperature (20-1100°) on the HV hardness
of titanium-tungsten-cobalt industrial hard alloys type TK has been
investigated. A critical analysis of the literature on the effect of
temperature on the hardness of alloys of type VK and TK, stellites,
and carbide hard alloys. It is established that the temperature

Card 1/2

65696

SOV/136-59-16-13/18

Mechanical Properties of Ceramic Tool Materials and Hard Alloys
at Elevated Temperatures

hardness and UTS of the ceramic material based on Al_2O_3
at $1200^{\circ}C$ are higher than those of other materials.
There are 6 figures, 3 tables and 10 references, 8 of
which are Soviet and 2 German.

ASSOCIATION:VNIITS

Card 7/7

65696

50V/136-59-10-13/16

Mechanical Properties of Ceramic Tool Materials and Hard Alloys
at Elevated Temperatures

granules; particular care was taken to ensure axial loading of the brittle specimens and the results of any test, in which fracture of the test piece occurred at a distance of more than 5 mm from its centre, were ignored. UTS of TsM-332 determined in this manner was 15 to 16 kg/mm². In the final series of experiments, the compressive strength of TsM-332 was determined on cylindrical specimens (10 mm diameter and 15 mm thick), tested on a 30 t hydraulic machine equipped with hard alloy supports. 90 Specimens, taken from two batches of TsM-332, were tested; the scatter of the results amounted to 20%. The average values of the compressive strengths equal to 80 to 90 kg/mm², were much lower than those obtained by other workers. In the conclusions, it is claimed that the results of the present investigation are more accurate than those quoted in the literature. Attention is drawn to the fact that hardness of the VK6M alloy decreases with rising temperature at a rate much slower than that of other investigated materials (H_V of this alloy being 1400 kg/mm² at 600°C and that both

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transverse rupture stress, σ_{M3T} , of the investigated materials was determined at temperatures up to 1200°C, a universal testing machine P5, equipped with a silit heating device, was used for this purpose. The test pieces, measuring 5 x 5 x 40 mm, resting on prismatic supports made of heat-resisting material, were maintained at the test temperature for 5 to 7 min before the load was applied at a strain rate of 11 mm/min. The results for the TsM-532 specimens are given in Table 3 under the following headings: test temperature, °C; σ_{M3T} , kg/mm²; number of tested specimens; scatter of results, %. The data given in Table 3 are also reproduced graphically in Fig 4. The temperature dependence of σ_{M3T} of VK and TK alloys, is illustrated in Fig 5a and 5b respectively. Flat, radiused test pieces were used for the determination of the UTS of the investigated materials. (Tested TsM-332 specimens are shown in Fig 6.) A standard tensile testing machine, or a specially adapted creep testing apparatus, was employed for this purpose, a gradual application of the "dead weight" load being attained by the use of copper

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(average WC grain size of approximately 1 μ) and made by a process involving intensified wet grinding of the powder mixture. The results of these measurements (load 1 kg, loading time - 30 sec) are reproduced in Table 1 (for the titanium-tungsten alloys) and Table 2 (for the tungsten-cobalt alloys) in which the test temperature ($^{\circ}\text{C}$) is given in the first columns. Curves plotted in Fig 1b show the temperature dependence of H_V for the following alloys: 1 - T30K4; 2 - T15K6; 3 - T14K8 4 - T5K10. The same relationship for the tungsten-cobalt alloys is illustrated by curves plotted in Fig 1B: 1 - VK6M; 2 - VK6V; 3 - VK8V; 4 - VK15V; 5 - (for comparison) TsM-332. Photographs of diamond pyramid indentations obtained on T5K10 specimens at (1) - 20, (2) - 600 and (3) - 1000 $^{\circ}\text{C}$ (corresponding to H_V values of 1650, 850 and 260 respectively) are reproduced in Fig 2b; finally, similar photographs for VK8V specimens at 200, 600 and 1000 $^{\circ}\text{C}$ (the corresponding H_V values being 1500, 650 and 200) are shown in Fig 2B (1, 2 and 3 respectively). In the next series of experiments, the

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1 to 5 kg, 20°C (H_v equal 1800 kg/mm²), 2 to 1 kg, 700°C (H_v equal 960 kg/mm²), 3 to 1 kg, 1000°C (H_v equal 540 kg/mm²). Hair cracks (originating at the corners of the indentations), visible clearly on these photographs, occurred even when the hardness measurement was taken at the highest test temperature; they were even more pronounced when a Rockwell machine (scale A, load 60 kg) was used (see Fig 3). No cracks were observed on specimens used for microhardness measurements (load 100 g) at room temperature, which gave values of H_v equal 1900 to 2000 kg/mm². In the next stage of the investigation, hardness of the following hard alloys was measured: (a) standard titanium-tungsten alloys T5K10, T14K8, T15K6, T30K4 and T5K6; (b) new types of tungsten-cobalt alloys (VK6V, VK8V, VK15V) characterized by high strength and coarsely-crystalline structure (average grain size of the WC phase 3 to 5 μ) made by the method developed by VNIITS and based on tungsten obtained by reduction at 1200°C; (c) alloy VK6M, characterized by improved wear resistance and finely crystalline structure

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pieces 15 mm diameter and 5 mm high. The specimens were held at the test temperature for 20 min before applying the load of 30 sec duration; not less than six measurements were taken at each temperature, each new test temperature being attained by cooling. After cooling to room temperature, the specimens were photographed ($\times 420$), the diagonals of the indentation were measured and the VPN values were found from the tables. The results are reproduced in the form of an $H_V(\text{kg/mm}^2)$ versus $t(^{\circ}\text{C})$ curve in Fig 1a (curve 3) where, for comparison, the results obtained by other workers are also shown: curve 1, based on the measurements of Betaneli (Ref 5), who used a 250 kg load, and curve 2, based on data due to Kazakov (Ref 6), who used a 1 kg load. It will be seen that hardness of TsM-332 decreases monotonically and linearly with rising temperature from about 1800 VPN at room temperature to about 600 at 1000°C and to 350 at 1100°C . Fig 1a shows photographs of the diamond pyramid indentations made on TsM-332 specimens under the following conditions of loading and temperature:

Card 2/7

15,210, 15,220, 15,230

ACTHONES: Brokmann, J. S. *Environ. Health Persp.* 1979, 33:1-10.

1991E...Mechan...
Hard Alloys in Processing

PERIODICAL: Tsvetnyye metally, 1977, No. 1, p. 10.

ABSTRACT

One of the new materials for application in the machine building and other engineering industries is the material based on diamond. The Moscow Hard Metals Institute has developed a method for producing this product. The structure of the material is characterized by a high degree of structural inhomogeneity (specifically, a high degree of grade differentiation) which is obtained by sintering of a material with a sintering atmosphere. The results of investigation described in this measure show that the material has a compressive strength of 100,000 kg/cm², is resistant to wear, has a high hardness measured by the diamond indenter.

21-12-78
Scientific Conference on the strength of elements of turbo-
machinery at elevated temperatures.

the materials.
Y. V. Kuleshov (VVA imeni N. Ye. Zhukovskiy) described
the application of the method of finite differences to
calculating the strength and profiling of non-uniformly
heated discs which operate in the elastic range, under
conditions of creep and under conditions of plastic
deformation.
G. Ye. Krumel' and A. G. Prokopenko (KPI and Leningrad)
reported on the method of starting large thermal power
equipment and V. I. Tseytlin reported "On the Calculation
of Optimum Tooth Dimensions".
For improving further the methods of calculation of the
strength of individual elements of turbo-machinery at
elevated temperatures, the members of the conference
recommended that theoretical and experimental investi-
gations should be extended on heat exchange in the
components of turbines as well as on the stress state
of these elements under conditions of non-steady state
heat exchange.

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(Note: This is a complete translation).

AVAILABLE: Library of Congress.

24-2-27/28
 Scientific Conference on the strength of elements of turbo-
 machinery at elevated temperatures.

"Technique of High Temperature Tests: Application VNIITS"
 and that of Ye. F. Gerasim (VIAM) "On Certain New Methods
 of Testing High Temperature Non-Alloyed Materials" and
 the paper of V. B. Troshkin, M. A. Filatova, A. V. Ryabchenkov
 and A. I. Mekhlisy (TsNIIKhAD) "Long Duration and Fatigue
 Strength in Air and in Gaseous Media of a Nickel-Chromium
 Alloy Used for Transportation (Gas) Turbines" were all
 devoted to the study of high temperature materials.
 The results of natural investigations of elements of
 turbo-machinery were dealt with in papers presented by
 the personnel of TsNII Khimi Polzunov.

N. M. Kelinovskiy (NII) dealt with the results of
 investigation of the carrying capacity and the long
 duration strength of specimens of gas turbine discs of a
 new design and a complicated configuration under
 conditions similar to the operating conditions. The
 author described the features of the heating system and
 of the damping equipment which ensures the possibility
 of long duration tests of natural discs by means of racing
 at a high temperature until disruption occurs and he also
 considered the deformations of a disc in the case of long

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Reclan, A. G. Kozlov (Soviet) approximate solution of the problem of the non-steady state temperature field in which the component is considered as a semi-infinite body during the initial instant of heating.

In his paper "Temperature Stresses in the Runner Blades and Discs" N. N. Malinin (MVTU) described engineering methods of calculating the thermal stresses in discs with variable elasticity parameters.

The papers of Ye. S. Podstrigach (Institute of Mechanical Engineering and Automation, Ukrainian Ac. Sc., L'vov) and of L. G. Fridman (Kuglynshev) dealt with investigations of the temperature stresses in thin-walled structures particularly in bodies of aviation engines.

P. S. Kuratov (TsKTI) and Ye. M. Molchanov (VTI) reported on complex investigations of the temperature fields, the stress state and the thermal fatigue of the rotors of definite turbines.

In his paper "Experimental Investigation of the Temperature Stresses in Fully Forged Rotors" G. A. Rayer reported on

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experimental investigations carried out at the Neva

In his paper "Certain Methods of Solving the Axis-Symmetrical Problem of the Theory of Elasticity Taking Into Consideration Mass Forces and the Temperature" E. S. Uman'skiy elucidated an approximate method of calculation of the stress state.

The paper of V. I. Danilovskiy (Mechanics Institute, Ac.Sc. USSR) was devoted to calculating the temperature fields in thin shells.

The paper of A. I. Veynik (Power Institute, Ac.Sc. Byelo-Russia) was devoted to an approximate method of solving the problem of thermo-conductivity in solid bodies.

The paper "Temperature Stresses in Thin Walled Structures" by I. A. Birger and B. F. Shor dealt with the investigations carried out by TsIAM on the thermal stresses in rods, taking into consideration variable elasticity parameters and also with the stress state of thin walled naturally twisted rods which are subjected to the effect of external forces and non-uniform heating.

In the paper "Temperature Stresses in Elements of Gas Turbines Under Conditions of Non-steady State Thermal

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assembly of the tails of the rotating blades.
 In his paper "Investigation of the Thermal Stresses in
 Turbine Rotors" V. D. Kovalenko described results of
 investigations in the field of thermo-elasticity carried
 out in the Institute of Structural Mechanics, Ukrainian
 A.S., the Kiev State University, the Kiev Polytechnical
 Institute and the Institute of Thermal Power, Ukrainian
 A.S. In these studies the following were investigated:
 problem of the plane stress state of a disc of variable
 thickness in the case of a cylindrically symmetrical
 temperature field, problem of complex bending of a disc
 in the case of an axis-symmetrical temperature field and
 a variable modulus of elasticity, an axis-symmetrical
 problem of thermo-elasticity for a thick-walled cylinder
 for various laws of changes of the temperature and of the
 modulus of elasticity along the radius and along the
 generatrix, etc. In the investigations strain gauges
 were used and also elastic modelling and computing
 mechanisms. Furthermore, a method was developed of
 calculating a rotor of a two-stage aviation gas turbine
 considering at each non-uniformly heated and rotating

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turbomashin pri vysokikh temperaturakh).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, No.2, pp. 165-167 (USSR).

ABSTRACT: A scientific conference was held in Kiev between September 28 and October 2, 1957 on problems of strength of elements of turbo-machinery at elevated temperatures which was convened by the Institute of Metallic-Ceramics and Special Alloys (Institut Metallokeramiki i Spetssplyavov), the Institute of Structural Mechanics (Institut Stroitel'noy Mekhaniki) and the Institute of Thermal Power (Institut Teploenergetiki Akademii Nauk Ukrainskoy SSR) of the Ac.Sc., Ukrainian SSR. About 100 people participated representing scientific and research establishments and works of Moscow, Leningrad, Kiev, Kharkov, Minsk, Kuybyshev, etc. In his opening address, Corresponding Member of the Ac.Sc. Ukraine I. N. Zhurav pointed out the importance of the problem of high temperature strength of components of turbo-machinery.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200025-6

PLATOV, A.B.

AUTHORS: Grigorenko, Ya. M. and Isakhanov, G.V. 24-2-27/28

TITLE: Scientific Conference on the strength of elements of turbo-machinery at elevated temperatures. (Nauchnoye soveshchaniye po voprosam prochnosti elementov turbomashin pri vysokikh temperaturakh).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001341200025-6

PLATONV, K. I.

Physiology, Pathological

Role of hypnotic inhibition by means of sleep as therapy in certain pathological states in man, Zhur. vys. nerv. delat, 2, no. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, October, 1952, UNCLASSIFIED.

PYATONOW, P.N.; LATOPINSKI, B. G.; LERASKIN, P.N.

"Spichrze komorowe i podłogowe" (Chamber and floor granaries), by P.N. Pyatonow, B.G. Laterowski and P.N. Leraskin. Reported in New Books (Nowe Książki), No. 12, June 15, 1956.

PLATONOW, M. S.

"Recherches sur les proprietes catalytiques dy rhenium. Communication II".
Platonow, M. S., Anissimow, S. B. et Kracheninnikowa, W. M. (p. 855)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1936, Vol. 6, No. 6

PLATONOW, M. S.

"Etude des proprietes catalytiques de rhenium. VI. Decomposition du methanol sur le rhenium."
M. S. Platonow, W. I. Tomilow, E. W. Tour. (p. 1803)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii). 1937, Volume 7, No. 11.

PLATONOW, M. S.

"Etude des proprietes catalytiques de rhenium. Communication IV." Platonow, M. S. et Tomilow, W. I. (p. 778)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii). 1957, Volume 7, No. 8-9.

PLATONOW, M. S.

"Etude des proprietes catalytiques de rhenium. V. Deshydrogenation des alcools butilques."
M. S. Platonow et S. B. Anissimow. (p. 1360)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii). 1937, Volume 7, No. 4.

PLATONOW, M. M.

"Structure des hydrures de bore." M. M. Platonow. (p. 1567)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii). 1937, Volume 8, No. 11

PLATONOVICH, PETROV M.KHAIL

✓ 6.7-15

551.556:551.311.31

(*) Petrov, Mikhail Platonovich, Podvizhnye peski pustyn' SSSR i bor'ba s nimi. [Moving sands of U.S.S.R. deserts and the struggle with them.] Ed. by T. F. Yakubov.

Moscow, Gos. Izdat. Geograficheskoi literatury, 1950. 454 p. 132 figs, 24 tables, 227 refs. Common geographical and subject index p. 429-450. Price: 13 Rub. **USSR** The history of attempts to control sand, and the formation of sandy regions between the Caspian and China are discussed and the location of each is shown on a large detailed chart. Each separate region is described and then (Ch. IV) the physics of blowing or drifting sand treated quantitatively (p. 98-132). Humidity (soil moisture and precipitation) conditions are discussed (p. 134-166). Aerodynamic factors in formation and movement of dunes in nature, with vegetative strips and with mechanical strips (snow fence type) are treated in Ch. IV and subsequent chapters. Particle size of various sands and chemical and geological composition are also treated. Information on meteorological elements in connection with moving sands in the deserts of Middle Asia, South Kazakhstan, the Caspian Region and Azerbaidzhan ASSR is confined to results of studies of winds in Middle Asia conducted in 1931-1932 by S. ZAOZERSKII (showing that winds of 5 m/sec speed and more make up only 11.3% of the total amount (p. 104) and that precipitation in the deserts is distributed irregularly during the year, although there is a rainless (May-Sept.) and rainy (Oct.-March) period with two maximums of precipitation in Jan. and in March (p. 155).) *Subject Headings:* 1. Sand drifting 2. Desert reclamation 3. Textbooks 4. Central Asia, U.S.S.R.—M.R. and A.M.P.

PLATONOVA, Ye.P.

Clinical aspects treatment of headaches. Med. sestra 19 no.7:28-32
Jl '60. (MIRA 13:8)

1. Iz kafedry nervnykh bolezney Altayskogo gosudarstvennogo meditsin-
skogo instituta.

(HEADACHE)

PLATONOVA, Ye.P. (Barnaul)

Abdominal reflexes in tuberculous meningitis. Vrach. delo
no.10:138-139 0 '63. (MIRA 17:2)

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instituta.

SHIVRINA, A.N.; LOVYAGINA, Ye.V.; PLATONOVA, Ye.G.

Nature and origin of the water-soluble pigment complex formed by
Inonotus obliquus (Pres.) Pil. [with summary in English]. Biokhimiia
24 no.1:67-72 Ja-F '59. (MIRA 12:4)

1. Laboratory of New Antibiotics, the Botanical Insitute, Academy of
Sciences of the U.S.S.R., Leningrad.

(FUNGI,

Inonotus obliquus, isolation of water-souble pigment
complex (Rus))

NIZOVSKAYA, O.P.; SHIVRINA, A.N.; LOVYAGINA, Ye.V.; PLATONOVA, Ye.G.;
MILOVA, N.M.

Conditions for the formation of the pigment complex of *Inonotus obliquus* in artificial cultures. *Mikrobiologiya* 29 no.3:441-445
My-Je '60. (MIRA 13:7)

1. Botanicheskiy institut im. V.L.Komarova AN SSSR, Leningrad.
(WOOD-STAINING FUNGI)

NIZKOVSKAYA, O.P.; MILOVA, N.M.; SHIVRINA, A.N.; LOVIAGINA, Ye.V.;
PLATONOVA, Ye.G.

Biology and biochemistry of "chaga," the sterile form of *Poria obliqua*. Trudy Inst. mikrobiol. no. 6:277-285 '59. (MIRA 13:10)

1. Laboratoriya novykh antibiotikov Botanicheskogo instituta AN
SSSR.

(PORIA OBLIQUA)

PLATONOVA-PETROVSKAYA, A.F.

PETROVSKIY, G.A.; PLATONOVA-PETROVSKAYA, A.F.

"Principles of drug therapy" by G.A.Petrovskii, A.F.Platonova-Petrovskaya. Voen.-med.zhur. no.9:96 S '56.
(DRUGS--ADMINISTRATION AND DOSAGE) (MLRA 10:3)

GUGLIN, Ye.R., kandidat meditsinskikh nauk (Stalingrad)

"Principles of medicinal therapeutics". G.A. Petrovskii, A.F.
Platonova-Petrovskaja. Reviewed by Ye.R. Guglin. Klin. med., 33 no.10:
92-94 0'55. (MIRA 9:2)

(THERAPEUTICS) (PHARMACOLOGY) (PETROVSKII, G.A.)

PLATONOVA-PETROVSKAYA, A.F.

The effect of histidine in clinical and experimental hepatitis. A. F. Platonova-Petrovskaya and R. V. Rudyi (Med. Inst. L'vov), *Russ. Med. (U.S.S.R.)* 31, No. 11, 35-8 (1953). — Dogs with induced hepatitis were treated with a 4% soln. of histidine-HCl. Of the damaged functions the one responsible for formation of prothrombin was first to improve and ultimately returned to normal. It took more time for carbohydrate and bilirubin to become normal. In human patients the reverse took place. With humans it was also possible to test the detoxifying capacity of the liver by administration of a Na benzoate load and estn. of excreted hippuric acid.

A. Idirkin

①

*Clinic Hospital Therapy, & Chair Pharmacology
Lvov Med. Inst.*

PLATONOVA-PETROVSKAYA, A.F.

G.A. Petrovskiy and A.F. Platonova-Petrovskaya, Osnovy lekarstvennoy terapii
(Biblioteka prakticheskogo vrachay) / Principles of Medicinal Therapy (Library
of the Practicing Physician) /, Medgiz, 11 sheets.

Gives data on the action of medicinal substances according to the state of the
organism and the basic methods of pharmacotherapy.

Book intended for physicians of all specialities.

SC: U-6472, 15 Nov 1954

PETROVSKIY, G.A.; PLATONOVA-PETROVSKAYA, A.F.

[Principles of medicinal therapeutics] Osnovy lekarstvennoy
terapii. G.A.Petrovskii i A.F.Platonova-Petrovskaya. Moskva,
Medgiz, 1953. 327 p. (MLRA 7:9)
(MEDICINE--PRACTICE)

11H

Use of pharmaceuticals which influence liver functions.
A. P. Platonova-Petrovskaya. *Farmakol. i Toksikol.* 8, No. 3, 30-40 (1945). -- Glucose (I), decholin (II), insulin (III), and insulin with glucose (IV) were given to dogs with chronic biliary fistula. Bile secretion and total cholates (V) were lessened by I, with more variable influence on dry residue and on concn. of V. The reaction is more pronounced in the 2nd stage of glucose action, which coincides with increased sugar deposition in the liver and is followed by a drop in blood sugar. Bile secretion is sharply raised by II, but concn. of V falls and blood sugar rises somewhat. Bile secretion and total V increase but concn. of V decreases when III is given. With IV the increase in bile secretion is a more complicated effect. In hypoglycemia, and still more when hyperglycemia is reached, about half the cases show decreases in total bile, total V and concn. of V. In isolated cat livers II lessens the capacity to restore liver sugars from nutrient solns. with low content of I; also from solns. contg. 1000-10000 mg. % I. Further study should be informative as to clinical aspects of liver pathology. Iulian P. Smith

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

62-100000

PLATONOVA-PETROVSKAYA, A.F.

"On the Administration of a Set of Pharmacological Drugs in the Liver Damages,"

Farmakol. i Toksikol., 5, No. 6, 1942.

Docent., Chair Pharmacology, Voroshilov Inst., -1942-.

CA.

7

Effect of copper in analysis of aluminum alloys, and the effects of iron and titanium in analysis of nickel alloys. K. A. Sukhenko and Z. S. Platonova. *Zavodskaya Lab.* 16, 1507, 9 (1950). -- Spectroscopic analysis of Al alloys for Mg, Mn, and Fe is not affected by up to 0.5% Cu, when Mg is done by lines of Mg 2852.13 and Al 2652.40, Mg 2779.83 and Al 2652.40; Mn by lines Mn 2593.73 and Al 2652.40; and Fe by lines Fe 2549.4 and Al 2652.40; Cu is done by lines Cu 2824 and Al 2669. In analysis of Ni alloys the detection of Fe, Ti, and Cr it was shown that there is no interaction between the lines of these elements in Ni alloys and the most suitable lines are: for Ti, Ti 3088.02; Ni 2583.00; for Cr, Cr 2853.22; Ni 2593.7, for Fe, Fe 2500.4; Ni 2583.00. G. M. Kozlov

KONIKOV, A.S.; PLATONOVA-CHERNYSHEVA, L.V.; DEGTYAREVA, A.N.;
LYZHINA, G.M.

Study of physiologically active substances in animal and plant
tissues. Report No.6. Uch. zap. Kras. gos. ped. inst. 15:195-200
'59. (MIRA 14:12)
(Tissue extracts) (Respiration)

KONIKOV, A.S.; PLATONOVA-CHERNYSHEVA, L.V.; KONDAKOV, Yu.P.;
ZAYTSEVA, A.I.

Adaptation of the Siberian silkworm (*Dendrolimus sibiricus*
Tschtr.) to the environmental conditions. Uch. zap. Kras.
gos. ped. inst. 15:145-175 '59. (MIRA 14:12)
(Krasnoyarsk Territory--Moths)
(Fir--Diseases and pests)

PLATONOVA-CHERNYSIEVA, L.V.; KONIKOV, A.S.

Effect of short-wave radiation on pupae of the Sibirian silkworm
(*Dendrolimus sibiricus* Tschtv.). Report No.2. Uch. zap. Kras.
gos. ped. inst. 15:177-182 '59. (MIRA 14:12)
(Moths)
(Ultraviolet rays--Physiological effect)
(X rays--Physiological effect)

KONIKOV, A.S.; PLATONOVA-CHEERNYSHEVA, L.V.

Adaptation of poikilothermic animals to the environmental
conditions. Uch. zap. Kras. gos. ped. inst. 15:201-205
'59.

(MIRA 14:12)

(Animals, Cold-blooded)

(Adaptation (Biology))

PLATONOVA, Z.V.

Regurgitation and vomiting during anesthesia under conditions
of emergency surgery. Trudy Inst. im. N.V. Sklif. 9:245-248 '63.
(MIRA 18:6)

1. Kafedra anesteziologii i Rentgenologicheskogo instituta s obshchestvenno-
niya vrachey.

YEVSEYEV, V.V.; STREL'NIKOV, A.V.; PLATONOVA, Z.P.

Improving the quality of castings of Al-Si alloys.
Bull. tekhn.-ekon. inform. Gos. mash.-strel. inst. im. N. P. Zhukovskogo
tekhn. inform. 17 no.6:38-39 Je '64.

(MIRA 17/11)

DAMIR, Ye.A.; SADYKOV, N.M.; GULYAYEV, G.V.; PLATONOVA, Z.V.

Characteristics of anesthesia in emergency surgical interventions.
Trudy Inst. im. N.V. Sklif. 9:175-180 '63. (MLRA 18:6)

1. Iz kafedry anesteziologii TSentral'nogo instituta usovershen-
stvovaniya vrachey (zav. kafedroy - dotsent Ye.A. Damir).

SUKHENKO, K.A.; MLADENTSEVA, I.O.; GOROZHANKINA, N.P.; PLATONOVA, Z.S.
AKSENOVA, A.V.; IL'INA, S.M.

Manufacture and investigation of standards of various alloys for
spectrum analysis. Izv.AN SSSR.Ser.fiz.19 no.2:161-164 Mr-Ap '55.
(Tartu--Spectrum analysis--Congresses) (MLRA 9:1)

USSR/Metals - Analysis

Dec 50

"Influence of Copper During Analysis of Aluminum Alloys and Influence of Iron and Titanium During Analysis of Nickel Alloys," K. A. Sukhenko, Z. S. Platonova

"Zavod Lab" No 12, pp 1507-1509

Expts proved that difference in Cu content in avial and duralumin has no effect on spectral detn of Mg, Mn, Fe, and Cu, and both alloys may be analyzed by common calibration curve plotted according to stds of duralumin. Also established that Fe, Cr and Ti in Ni alloys have no mutual influence and

182T96

USSR/Metals - Analysis (Contd)

Dec 50

may be detd using single set of stds, common for several grades of Ni-alloys.

182T96

PLATONOVA, Z. S.

PLATONOVA, Z. S.

K.A. Sazhenko and Z. S. Platonova. Effect of copper in analysis of aluminum alloys and the effect of iron and titanium in analysis of nickel alloys. P. 1107

SO: Factory Laboratory, No. 12, 1950

USSR/ Analytical Chemistry. General Problems. G-1

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27118.

on aluminum base and of silicon alloys in the
shape of drawn wire is described in more detail.

Card 2/2

Platonova, Z.S.
USSR/ Analytical Chemistry. General Problems.

G-1

Abs Jour: Referat. Zhur.-Khimiya, No. 8, 1957, 27118.

Author : K.A. Sukhenko, I.O. Mladentseva, N.P. Gorozhankina, Z.S. Platonova, A.V. Aksenova, S.M. Il'ina.

Inst. : Academy of Sciences of USSR.

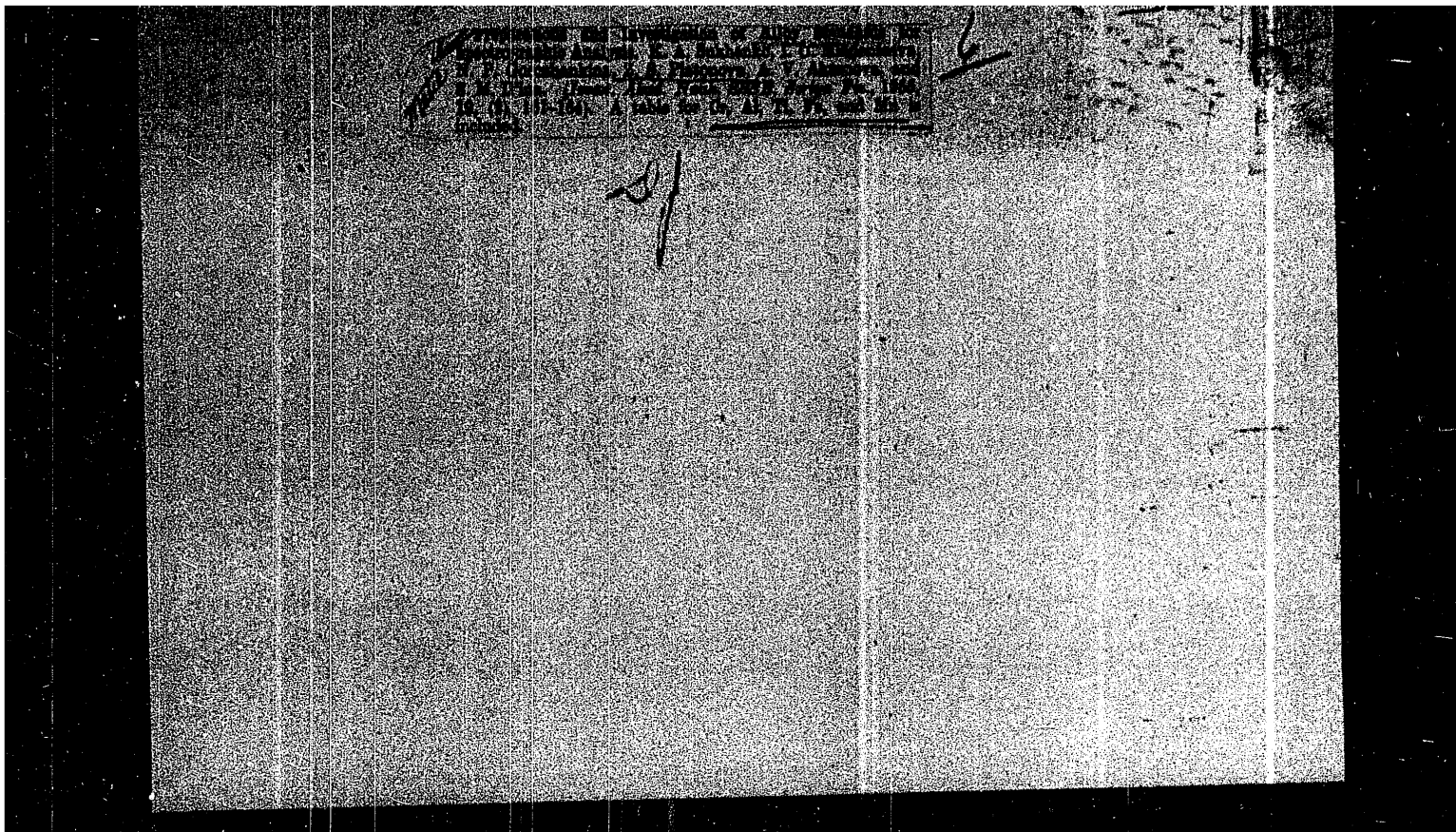
Title : Production and Study of Standards of Various Alloys for Spectral Analysis.

Orig Pub: Izv. AN SSSR, Ser. fiz., 1955, 19, No. 2, 161 - 164.

Abstract: Abridged review of the state of production of standards for spectral analysis in USSR. The method of casting of standards at the Scientific Research Institute of Ministry of Aviation Industry is described. The application of the method of continued casting for preparing standards

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Analyzing the causes of the difference in the cost level of regular repairs and general overhauling of equipment in the cotton spinning industry. Nauch.-issl.trudy IvNITI 23:184-208 '59. (MIRA 14:4)
(Spinning machinery--Maintenance and repair)

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ANTSUTA, Ye.B., arkhitekt.; KIRILLOV, N.P., arkhitekt.; KUZNETSOV, V.V., arkhitekt.;
 SLODINTSEVA, M.N., arkhitekt.; PYATIN, S.G., inzh. Prinsipialni uchastnye:
 CHUYENKO, R.G., arkhitekt.; MOSEVICH, Ya.Ya., arkhitekt.; GLAZKOV, F.I.,
 st. tekhnik; GOLUKHOV, G.I., inzh.; SAMSONOVA, T.T., inzh.; KOLESOVA,
 Ye.Ye., st. tekhnik; MAKAROVA, T.N., tekhnik; SHAMBAT, M.S., inzh.;
 SEMENOVA, G.V., inzh.; PLATUNIN, Yu.S., gr. inzh.; VOL'NOVA, T.F.,
 tekhnik; SOLOV'YEV, M.I., inzh.; MOREV, I.A., tekhnik.

[Two-apartment house with two-room apartments; standard plan 1-102-5]
 Dvukhkvartirnyi zhiloi dom, kvartiry v dve komnaty; tipovoi proekt
 1-102-5. Moskva, Al'bom 1. 1960. 27 p. (MIRA 14:10)

1. Moscow. TSentral'nyy institut tipovykh proyektov.
 (Apartment houses---Designs and plans)

PLATONOVA, YE. P., KALINA, V. O.

Headache

Headache in acute, chronic paranasal sinusitis. Uchen. zap. vt. mosk. i. d. inst., 4, '51.

Monthly List of Russian Accessions, Library of Congress
April 1952. UNCLASSIFIED.

Platonov, Yevgenii V.

SHISHKIN, Kirill Aleksandrovich, professor; GUREVICH, Abram Natanovich, kandidat tekhnicheskikh nauk; STEPANOV, Aleksandr Dmitriyevich, kandidat tekhnicheskikh nauk; PLATONOV, Yevgenii Veniaminovich, inzhener; YAKOBSON, P.V., kandidat tekhnicheskikh nauk, retsenzent; GNEZDILOV, V.B., inzhener, redaktor; SOKOLOVA, T.F., tekhnicheskii redaktor

[Soviet diesel locomotives] Sovetskie teplovozy. Izd. 3-a, ispr. 1
dop. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956.
387 p. (MLRA 9:12)

(Diesel locomotives)

PLATONOVA, Yekaterina Pavlovna, doktor med. nauk; YEL'KOV, F., red.;
ZHDANOVA, G., tekhn. red.

[Alcohol and the nervous system] Alkogol' i nervnaia sistema. Barnaul,
Altaiskoe knizhnoe izd-vo, 1960. 44 p. (MIRA 14:10)
(ALCOHOLISM) (NERVOUS SYSTEM)

PLATONOVA, Ye.P.; KALINA, V.O.

Headache in acute, chronic paranasal sinusitis. Uchen. zapiski vtor.
moskov. med. Inst. Stalina Vol 2:114-119 1951. (CLML 21:4)

1. Candidate Medical Sciences for Platonova. 2. Department of Nervous
Diseases (Director--Prof. A.M. Grinsthteyn, Active Member of the Academy
of Medical Sciences USSR) and Clinic for Diseases of the Ear, Nose, and
Throat (Director--Prof. B.S. Preobrazhenskiy).

PLATONOVA, Ye.P.

Pathogenesis and therapy of headache in migraine, arterial hypertension and hypotension [with summary in French]. Zhur.nevr. i psikh. 57 no.9:1157-1163 '57. (MIRA 10:11)

1. Klinika nervnykh bolezney (nauchnyy rukovoditel' - prof. A.M. Grishteyn) II Moskovskogo meditsinskogo instituta imeni I.V.Stalina.
(HYPERTENSION, complications,
migraine, ther. (Rus))
(HYPOTENSION, complications,
same)
(MIGRAINE, etiology and pathogenesis,
hypertension & hypotension, ther. (Rus))

PLATONOVA, Yekaterina Pavlovna

[Headache] Golovnye boli. Moskva, Medgiz, 1960. 218 p.
(MIRA 14:1)

(HEADACHE)

PLATONOVA, Ye.P.

Hypertrichosis following cerebrocranial trauma of the parieto-
frontal region. Zhur. nevr. i psikh. 61 no.9:1355-1358 '61.
(MIA 14:9)

1. Kafedra nervnykh bolezney Altayskogo meditsinskogo instituta.
(BRAIN--WOUNDS AND INJURIES) (HYPERTRICHOSIS)

PLATONOVA, YE. P., Doc Med Sci -- (diss) "Headaches in the presence of
intercranial and extracranial diseases close to the." Moscow, 1957,
85 pp (Secton Moscow State Medical Institute in T. I. Mirosh, 8-10-57)
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SO: Leto is' Shurnal'nikh Obozry Vol. , Moskva, 1949

* 1 GURLEV, A. S.

PLATONOVA, Ye.M.

GURLEV, A.S., agronom; PLATONOVA, Ye.M., agronom; PRISHCHENKO, S.S., kandidat
tekhnicheskikh nauk.

Electric sterilization of soil. Izv.TSKnA no.2:219-229 1967.
(MSRA 10:9)

(Soil disinfection)

GURLEV, A.S., agronom; PLATONOVA, Ye.M., agronom

Carbothion, an efficient measure against the root knot
nematode. Zashch. rast. ot vred. i bol. 7 no.1:35-34 '62.
(MIRA 15:6)

1. Sovkhoz "Belaya dacha" Moskovskoy oblasti.
(Carbamic acid)
(Nematode diseases of plants)

AVTCHIN, S.M., kand. tekhn.nauk, nauchn. sotr.; GILDER, I.I., kand.
tekhn.nauk, nauchn. sotr.; GOLIKH, G.A., kand. sotr. nauk,
nauchn. sotr.; LITVIN, I.B., kand. tekhn. nauk, nauchn.
sotr.; PLATONOVA, Ye.I., nauchn. sotr.; PRINYPAL, N.V.,
kand. tekhn. nauk, nauchn. sotr.; Prinyali uchastiya: ZOTOV,
V.A., nauchn. sotr.; FILAYOVA, M.Y., nauchn. sotr.; HIKITH,
G.N., nauchn. sotr.; ROMASHOV, A.M.; GILDER, I.I., rel.

[Recovery and use of secondary wood in consumers' goods] Is-
luchenie i primeneniye vtorichnoi shorati v izdeliyakh narod-
nogo potrebleniya. [By] S.M.Avtchin i dr. Moskva, Izd-vo
"Legkaya industriya," 1964. 260 p. (Mol. 17:5)

1. Nachal'nik priyeml'nogo tsekhа Tushkinskoy fabрики No.13
(for Romashov).

PLATONOVA, Ye. G.

LOVYAGINA, Ye. V.; SHIVRINA, A. N.; PLATONOVA, Ye. G.

Chromatographic analysis of hydrolysates of the active principle of
excrecences produced by the pore fungus *Inonotus obliquus* f. *sterilis*
[with summary in English]. *Biokhimiya* 23 no.1:41-46 Ja-F '58.
(MIRA 11:3)

1. Laboratoriya novykh antibiotikov Botanicheskogo instituta im.
V. L. Komarova, Leningrad.

(CHROMATOGRAPHIC ANALYSIS) (WOOD-DECAYING FUNGI)

SHIVRINA, A.N.; NIZKOVSKAYA, O.P.; LOVYAGINA, Ye.V.; PLATONOVA, Ye.G.;
MILOVA, N.M.

Chemical composition of pore fungi at different stages of their
development. Bot.zhur. 44 no.12:1724-1727 D '59.
(MIRA 13:4)

1. Botanicheskiy institut im. V.L.Komarova Akademii nauk SSSR,
Leningrad.

(Mushrooms--Chemical composition)

SHIVRINA, A.N.; LOVYAGINA, Ye.V.; PLATONOVA, Ye.G.

Spectrophotometric characteristics of a crystalline carbonyl compound isolated from the pigment complex of the fungus *Inonotus obliquus*. Dokl.AN SSSR 132 no.6:1444-1447 Je '60. (MIRA 13:6)

1. Botanicheskiy institut im. V.L.Komárova Akademii nauk SSSR. Predstavleno akademikom A.L. Kursanovym.
(WOOD-DECAYING FUNGI) (CARBONYL COMPOUNDS)

LOVYAGINA, Ye.V.; SHIVRINA, A.N.; PLATONOVA, Ye.G.

Investigating carbonyl fraction of hydrolysates of a water-soluble pigment complex produced by the polyporaceous fungus *Inonotus obliquus*.
Biokhimiia 25 no.4:640-645 J1-Ag '60. (MIRA 13:11)

1. Laboratory of Biochemistry of Lower Plants, Botanical Institute,
Academy of Sciences of the U.S.S.R., Leningrad.
(MUSHROOMS) (SINAPALDEHYDE)

L 13090-66

ACC NR: AP6000389

100% of the spider mites in 24 hrs. following treatment. With reduction of kel'tan concentration to 0.5% and increase of dose to 6 ml/m³, 65 to 100% of the spider mites are killed and by the 15th day are completely destroyed. The number of paralyzed spider mites is highest and the number of killed mites is lowest on leaves farthest removed from the aerosol generator. For more effective treatment, aerosol spraying should be conducted from both ends of the hothouse with a 2 hr. interval between treatments to ensure more complete coverage of leaf surfaces. Compared to hexachloran, 30 times less kel'tan is required. In tests using a 50% solution of polychlorpinene, a 12 ml/m³ dose killed from 10 to 50% of the spider mites and a 15 ml/m³ dose killed 37 to 78%. The addition of kel'tan (amount not given) increased the effectiveness of polychlorpinene to 95.7%. Orig. art. has: None

SUB CODE: 06, 02/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 000

Card 2/2 *AR*

L 13090-66 EWT(1)/EWA(j)/EWA(b)-2 RO

ACC NR: AP6000389 (A, N) SOURCE CODE: UR/0348/65/000/010/0025/0025

AUTHOR: Gurlev, A. (Agronomist); Platonova, Ye. (Agronomist)

ORG: None

TITLE: Aerosol disinfection of hothouses

SOURCE: Zashchita rasteniy ot vreditel'ey i bolezney, ¹⁰no. 10, 1965, 25

TOPIC TAGS: plant disease control, insecticide, aerosol, agriculture, insect control

ABSTRACT: In 1963 experiments were conducted at the Belaya dacha sovkhov to test kel'tan (Abstracter's Note: transliteration of Russian name, chemical formula not given) and polychlorpinene as pesticides in aerosol spraying of hothouses. Working solutions of kel'tan in green oil and polychlorpinene in diesel oil were prepared 24 hrs. in advance at temperatures below 15°. The hothouses were sealed airtight prior to spraying. Three to five cucumber leaves were picked from 10 different sites in the hothouses before and 24 hrs. after treatment to determine the percentage of spider mites killed. If any spider mites were still alive, the preparation dose was increased and treatment was repeated. Findings show that a 1% kel'tan solution in a 3 ml/m³ dose kills 80 to

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UDC: 632.95

GOLENKOV, P. (Nesvizh, Minskoy oblasti); NIKITIN, V.; NALIMOVA, Yu.,
mladshiy nauchnyy sotrudnik; GURLEV, A., agronom; PLATONOVA,
Ye., agronom; YEGOROVA, L., nauchnyy sotrudnik; NESTERENKO,
N., kand. biolog. nauk

From the practices in the use of poisonous chemicals. Zashch.
rast. ot vred. i bol. 10 no.5:25-27 '65. (MIRA 1965)

1. Toksikologicheskaya laboratoriya Nauchno-issledovatel'skogo
instituta kartofel'nogo khozyaystva (for Yegorova). 2. Toksikolo-
gicheskaya laboratoriya Vsesoyuznogo nauchno-issledovatel'skogo
instituta zashchity rasteniy pri Vsesoyuznom nauchno-issledova-
tel'skom institute zashchity leskly (for Nesterenko).

LA

18

Sorption activity of Russian clays for vapors. II. E. V.

Alekseevskii and V. P. Platonova, *J. Applied Chem.* (U. S. S. R.) 12, 1357 (1939) (French, 1373) (1939); *Chim. A.* 31, 7200. Acid treatment of Russian clays with detn. of an optimal temp. for the sorption of vapors and gases were investigated. The optimal conditions for these treatments were 60% H_2SO_4 or 20% HCl and drying at 100-110°. The electrolysis had no effect on the activity of the Izmailov clay. The dynamic activity of clays was very small. The Crimean "kil" and "gumbrin" (after acid treatment) had the highest adsorption activity. The capillary condensation was observed at the concn. of the adsorbents C_2H_6 , CS_2 , C_2H_4 , H_2O and $MeOH$ above 40 mg/l. The activity of clay decreased with an increase of the gravimetric d., the least active being the Izmailov clay. The retention of C_2H_6 on clays was insignificant. The acid treatment increased the diam. of pores of clay and decreased their activity for the adsorption of vapors and gases. The CI capacity of clays, after the acid treatment, was much less than that of low-grade coal.

A. A. Podgorny

ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION

PLATONOVA, V.G.

Economic effectiveness of plant protection. Zashch. rast.
ot vred. 1 bol. 7 no.7:13-14 J1 '62. (MIRA 15:11)
(Plants, Protection of--Economic)

BELKIN, M.N., inzh.; PLATONOVA, V.P., inzh.

Construction of hydraulic tunnels in soft ground. Trudy Nauch.-issl.
sekt.Mosk.fil.Inst."Orgenergostroi" no.3:19-53 '59. (MIRA 14:7)
(Tunneling)

ILLEGIBLE

PLATONOVA, V.I.; TUTAYEV, I.M.

Theory of nonlinear surfaces in an affine three-dimensional
space. Vestsi AN BSSR. Ser. Fiz.-tek. nav. no.3:11-20 '81.
(SMA 14:10)

(Surfaces)

PLATOVA, V. I.
EXCERPTA MEDICA Sec.12 Vol.12/5 Ophthalmology May 58

728. THE PASSAGE OF FLUORESCEIN INTO THE FLUID OF THE ANTERIOR CHAMBER OF A HEALTHY AND A DAMAGED EYE (Russian text) - Platova V. I. - SBORN. INFORM. -METOD. MATERIAL. INST. 1956, 4 (76-80)

Changes in permeability of the vascular walls in the damaged and the healthy eye were investigated. The degree of permeability was assessed by the intensity of fluorescein staining of the fluid content of the anterior chamber. Five healthy individuals and 17 patients with penetrating wounds were investigated. In the healthy ones fluorescein passed into the anterior chamber in small amounts in 45 min.-2 hr. and disappeared in 4-6 hr. In the presence of inflammatory phenomena in a damaged eye, fluorescein passed into the fluid of the anterior chamber in 15-30 min. The time taken by the stain to appear and then to diminish in intensity, and the length of its stay in the anterior chamber, increase in proportion as the inflammatory phenomena diminish; where there was inflammation in the damaged eye, an increase in permeability was observed in the other eye. When the inflammation in the damaged eye abated, the increased permeability of the other eye diminished at the same time. (S)

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PLATONOVA, V.I.; TUTAYEV, L.K.

Theory of line surfaces in an affine three-dimensional space.
Vestsi AN SSSR matematicheskikh nauk, 1974, No. 1, 13-14 (1974 13:4)